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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,930	05/23/2007	Patrick Morvan	PF040025	3752

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EXAMINER	
FRY, MATTHEW A	

ART UNIT	PAPER NUMBER
2629	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/589,930	MORVAN ET AL.	
	Examiner	Art Unit	
	MATTHEW A. FRY	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 August 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,8 and 9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 8-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 8/30/10 have been fully considered but they are not persuasive.

2. Applicant argues (Remarks page 7) that "Chen in no way discloses means for coding, for each image, the video information intended to be displayed by each of the elements of the valve as a common value shared by a group of at least two adjacent elements of the valve and a specific value, nor a specific drive means associated to each element of the valve and intended to store the specific value nor common drive means associated to each group of the at least two elements of the valve and intended to store the common value, let alone the structures of the specific drive means and of the common drive means as claimed in amended claim 1."

Chen teach (Col 5, lines 3-18) saving video data in the storage capacitors within the display elements. As such, it is implicit that there exist some means for coding, for each image, video information intended to be displayed by each of the elements. Chen does not explicitly disclose a value shared by a group of at least two adjacent elements. However, Chen does teach the existence of 8 grayscale values (Col 10, lines 17-32). It would have been obvious for a displayed image (using only 8 grayscales) to have at least two adjacent pixels displaying the same grayscale (value). Thus, at any point that an image is displayed on Chen's display wherein two adjacent pixels have the same gray scale (for example a black screen) this limitation would have been met. As Chen

does not teach away from images that contain the same grayscale in adjacent pixels, it is an inevitable occurrence.

Additionally, pixel circuits that contain two sub-pixels (two elements), which receive the same value, from a single pixel circuit are well known and are commonly used in the art. Such an obvious design modification would further meet the limitation of a common value shared by two elements.

Claim 1 defines a specific drive means as a first storage capacitor, first switch and second switch coupled to the mirror electrode intended to store a specific value. Chen teaches Cs A11, Taw11 and Tad11 connected to the mirror electrode intended to store a specific value (D1) (see figures 4 and 5).

Claim 1 defines a common drive means as a second storage capacitor, third switch, and fourth switch coupled to each element of a group to store a common value. Chen teaches CS B11, TBw11 and TBd11 connected to the mirror element intended to store a common value (D2) (see figures 4 and 5).

3. The Examiner would recommend, in order to overcome the current ground of rejection, that the Applicant recite more clearly the structural connections of figure 5.

Information Disclosure Statement

4. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a

separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered. Specifically pages 1 and 7 discuss US 6,476,785 and FR 2,841,366 which have not been listed in an IDS.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-5 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al (US 2004/0041768) in view of well known art.

7. In regards to claim 1, Chen discloses an image display device comprising: a valve (see figure 4) of elements (411) arranged in rows and columns, each of said elements comprising a liquid crystal (403) one of whose electrodes, called the mirror electrode (401), is controlled by drive means so as to display video information relating to at least one image (see ¶ 40),

wherein said drive means consist in: for each element (411) of the valve, a specific drive means (Taw11, Cs A11, Tad11) coupled to the mirror electrode (401) of the liquid crystal of said element and intended to store the specific value associated with the video information to be displayed by said element and to apply it to the mirror electrode of the liquid crystal of said element,

said specific drive means of an element comprises: a first storage capacitor (Cs A11) for storing the specific values present on a column line (CH1) of the valve and intended for said element, a first switch (Taw11) for connecting the column line to a first end of said first storage capacitor, the other end being connected to a fixed potential, and a second switch (Tad11) for connecting the first end of the first storage capacitor to the mirror electrode of the liquid crystal of the element (see figure 4); and

for each group of at least two elements of the valve, a common drive means (Tbw11, Cs B11, Tbd11, etc) coupled to each element of said group and intended to store said common value associated with the video information to be displayed by said elements of the group and to apply it to the mirror electrode of the liquid crystals of the elements of said group,

said common drive means comprises: a second storage capacitor (Cs B11) for storing the common value present on the column line of the valve and intended for said group, a third switch (TBw11) for connecting the column line to a first end of the second storage capacitor (Cs B11), the other end being connected to a fixed potential, and fourth switches (TDB11) for connecting the first end of the second storage capacitor to the mirror electrodes (401) of the liquid crystals of the elements of the group (see figure 4),

the specific drive means and the common drive means that are coupled to one and the same group of elements controlling the liquid crystals of the elements of the group in such a way as to alternately display the specific values and the common value

of the video information relating to the elements of the group for an image (see figures 4 and 5).

Chen does not explicitly disclose a means for coding, for each image, the video information intended to be displayed, however Data drivers are well known in the art, therefore it would have been obvious to one of ordinary skill in the art to include a data driver to code video data so that the display may function. Chen teach (Col 5, lines 3-18) saving video data in the storage capacitors within the display elements. As such, it is implicit that there exist some means for coding, for each image, video information intended to be displayed by each of the elements. Chen does not explicitly disclose a common value shared by a group of at least two adjacent elements of the valve and a specific value.

It is well known in the art that while displaying an image, adjacent pixels can display the same value grayscale (for example a blank screen) and so it would have been obvious to one of ordinary skill in the art that four adjacent pixels, in Chen's display, can display the same value during a single field, and thus store a common value in their respective driving means (Cs B11, Cs B12, Cs B21, Cs B22) while storing individual specific values in (Cs A11, Cs A12, Cs A21, Cs A22). Chen teaches the existence of 8 grayscale values (Col 10, lines 17-32). It would have been obvious for a displayed image (using only 8 grayscales) to have at least two adjacent pixels displaying the same grayscale (value). Thus, at any point that an image is displayed on Chen's display wherein two adjacent pixels have the same gray scale (for example a black screen) this limitation would have been met. As Chen does not teach away from

images that contain the same grayscale in adjacent pixels, it is an inevitable occurrence.

8. In regards to claim 2, Chen discloses the display device according to claim 1, wherein it is able to process video information relating to at least two colors transmitted sequentially, and in that the specific drive means and the common drive means that are coupled to one and the same group of elements control the liquid crystals of the elements of the group in such a way as to alternately display the specific values of the video information relating to a color and the common values of the video information relating to said color or to another color (see ¶ 38 and figure 5).

9. In regards to claim 3, Chen discloses a device according to claim 2, wherein it furthermore comprises: a light source (see ¶ 38) for producing colored light and illuminating said valve of elements, said valve reflecting or allowing through a quantity of light as a function of the specific and common values that are transmitted to it by the coding means (see ¶ 34), and said light source being synchronized with the coding means so that, when specific or common values relating to a color are applied to the mirror electrodes of the liquid crystals of the valve, the colored light source corresponding to said color lights (see ¶ 38 and figure 5). Chen does not explicitly disclose a color wheel. However, color wheels are a well known method of providing colored light and therefor it would have been obvious to one of ordinary skill in the art to interpose a color wheel between a white light source and a valve, said wheel comprising a color segment for at least two colors wherein the color segments are synchronized

with the grayscale values sent to the valve. This can be evidence by Richards (US 2004/0155856) figures 1 and ¶ 23-24 and 33.

10. In regards to claim 4, Chen discloses a device according to claim 1, wherein the adjacent elements (pixels containing Cs A11, Cs A21) of said group belong to consecutive rows and to a column of elements of the valve (see figure 4).

11. In regards to claim 5, Chen discloses a device according to claim 1, wherein the adjacent elements of said group (pixels containing Cs A11, Cs A12, Cs A21, Cs A22) belong to consecutive rows and to consecutive columns of elements of the valve (see figure 4).

12. In regards to claim 8, Chen discloses the device according claim 1,wherein the groups of elements comprise two elements pixels containing (Cs A11, Cs A21) (see figure 4).

13. In regards to claim 9, Chen discloses the device according to claim1 wherein the groups of elements comprise four elements (pixels containing Cs A11, Cs A12, Cs A21, Cs A22) (see figure 4).

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 5,926,158 and US 6,963,324 both show common and specific drive means.

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW A. FRY whose telephone number is (571) 270-7355. The examiner can normally be reached on Monday thru Friday, 8:00 AM to 5:00 PM, alternate Fridays, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Supervisory Patent Examiner, Art Unit 2629

/MATTHEW A FRY/
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